

REMARKS

Upon entry of the above amendments, this application will contain claims 1, 3, 4, 6-10, 12, 16 and 18 pending and under consideration. The application was originally filed with claims 1-15. In a Preliminary Amendment, claims 2 and 13-15 were canceled and new claims 16-17 were added. In the present submission, the claims have been further amended. Claims 5, 11, and 17 have been canceled, and a new claim 18 has been added. As discussed more fully below, it is believed that the claims are patentable. Reconsideration leading to allowance of all pending claims is requested.

I. Rejections under 35 USC §112

1. Claims 1, 3-6, 10-12, 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, for alleged failing to comply with the written description requirement. It was stated that “[n]o support was found in the specification or the originally filed claims for the amendments, per the Preliminary Amendments filed September 14, 2005, for :

a) the change in carbon ranges for the substituent “(C₃-C₇)alkyl”, under the definition of R1 in claims 1 and 3.

Claim 1 has been amended by deleting the term “(C₃-C₇)alkyl” from the list of substituents for R1. Therefore, this rejection is moot. Withdrawal of this rejection is requested.

b) the added substituent “(C₃-C₄)alkylaryl” under the definition of R1 in claim 1; and
The variables for R1 in Claim 1 have also been amended by replacing the term “(C₃-C₄)alkylaryl” with -- substituted benzyl, (C₁-C₁₂)alkylheterocyclic radical, (C₂-C₄) and (C₂-C₄)alkylaryl, or aryl—wherein the aryl or heterocyclic group is optionally substituted and the benzyl is substituted with 1 to 2 or 3 groups independently selected from (C₁-C₁₂)alkyl, (C₂-C₁₂)alkenyl, (C₁-C₁₂)alkoxy, (C₁-C₆)alkyletheralkyl, and (C₁-C₁₂)haloalkyl --. It is believed that this amendment and the prior amendment submitted in the Preliminary Amendment do not add new matter. Support for the substituted benzyl group can be found in the present application in Examples 10-14 and 26, ¶¶0181-0197 and 0225-0226. (All citations herein to the present application refer to the published US patent application no. US20060276522 published 7 December 2006.) Support for insertion of the (C₂-C₄) alkylaryl be found in Examples 15, (C₂ alkylaryl) ¶0198; 17 (C₃ alkylaryl), ¶0202-0204; and 18 (C₄ alkylaryl), ¶206-209, inter alia. Support for the insertion of the term “optionally” can be found in the claims as originally filed. It is believed that the amendments do not add new matter. In light of the above, withdrawal of this

rejection is requested.

c) the number of substitutions on the aryl or heterocyclic rings, under the definition of R1 in claim 1.”

The number of substituents on the aryl ring of the alkylaryl and benzyl groups has been reinstated to that found in the claims as originally filed.

Claim 1 has been amended as noted above. Claims 3, 4, 6, 10, 12, and 16 depend from or refer to the compound of claim 1. Claims 5, 11, and 17 have been canceled. In light of the above comments and amendments withdrawal of these rejections is requested

2. Claims 10-12, 16 and 17 are rejected under 35 U.S.C. 112, first paragraph, for alleged failing to comply with the enablement requirement. The Applicants traverse this rejection. Claim 10, as currently amended, recites a method of *inhibiting hepatic lipase*. (Emphasis added.) The present application provides sufficient enablement for one skilled in the art to practice the claimed invention.

The Examiner’s targeting of the treatment of diabetes as a basis for rejecting claim 10 is misplaced. Consequently, the analysis under the Wands Factors is misapplied.

The claim 10 claims a method of inhibiting hepatic lipase. As noted above, the present application provides a number of working examples in the Table beginning at ¶0154, along with the IC₅₀ values of the illustrated compounds for inhibiting hepatic lipase. The application teaches one how to determine the inhibition of hepatic lipase. The procedure for the hepatic lipase assay is found in the application beginning at ¶0134. The level on skill in the art is very high typically one with a masters or PhD education level. Thus considering the Wands factors as applied to the claimed invention, this application provides sufficient enablement for one skilled in the art to use the present invention.

Claim 12 further provides that for a pharmaceutical formulation that includes an effective amount of a compound of claim 1 for treating the effect of elevated hepatic lipase activity. It is well known that if one inhibits the enzyme such as hepatic lipase, its activity is reduced. Consequently for all the reasons that claim 10 is enabled, it is also believed that claim 12 is sufficiently enabled. Furthermore, the present application provides examples of formulations that would be suitable for the hepatic lipase inhibitor. (See in the present application beginning at ¶0089 and following.)

In light of the amendments to claims 10, 12, and 16 and the above comments, withdrawal of the rejection is requested. Claims 11 and 17 have been canceled. Therefore the rejection of these claims is moot.

II. Rejections under 35 USC 112, second paragraph

Claims 1, 3-6, 9-12, 16 and 17 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, the claims were rejected as follows:

1. In claim 1, an additional comma appears after “(C₅-C₇)alkyl”. This extraneous comma has been deleted.

2. In claim 1, under the definition of R₃, R₄, R₅ and R₆, an “and” is missing before the last substituent i.e., before “(C₁-C₆)haloalkyl”. Claim 1 has been amended by replacing the members of the Markush group, with the exception of hydrogen, for R₃, R₄, R₅, and R₆ with some of members of the Markush group found in claim 5 (now canceled). The members include: (C₁-C₄)alkyl, (C₂-C₄)alkenyl, -O-(C₁-C₃ alkyl), COOH, C(O)(C₁-C₃ alkyl), C(O)O(C₁-C₃ alkyl), -CF₃, and halo. None of these members are substituted. Therefore the “and” referred to above has been deleted.

3. Claim 3 lacks antecedent basis from claim 1 for R₁ representing:

- a) -O-(C₁-C₃alkyl); and
- b) -CF₃.

Claim 3 has been amended by deleting -O-(C₁-C₃alkyl). Claim 1 has been amended by added the -CF₃ group found in claim 3.

4. Claim 4 lacks antecedent basis from claim 1 for R₁ representing “benzyl”.

Claim 1 has been amended by adding benzyl to the Markush group for R₁. Since the benzyl is found in the Markush group for R₁ in dependent claim 4, it is believed that this amendment does not add new matter.

5. Claim 5 lacks antecedent basis from claim 1 for R₃, R₄, R₅, and R₆ representing:

- a) (C₁-C₄) alkyl;
- b) -O-(C₁-C₃ alkyl);

- c) (C₃-C₁₂)cycloalkyl;
- d) COOH; and
- e) halo.

Claim 5 has been canceled. Therefore this rejection is moot.

6. Claim 6 lacks antecedent basis from claim 1 for R5 representing:

- a) COOH;
- b) chloro; and
- c) bromo.

Claim 6 has been amended by deleting the term -COOH. Claim 1 has been amended, as noted above, by replacing the Markush group for R₃, R₄, R₅, and R₆ with a Markush group selected from the listing found in claim 5 including "halo". Introduction of the halo group into claim 1 provides antecedent basis for the chloro and bromo moieties in claim 6. Further, since halo was in claim 5 as originally filed, it is believed that this amendment does not add new matter. Withdrawal of this rejection is requested.

7. Claim 7 was considered confusing. A suggestion for re-writing claim 7 is by deleting "of formula (I)...wherein R1 through R6 are selected to provide a compound". ...Claim 7 has been amended as suggested. Further, claim 7 has been amended by canceling the compounds not encompassed with current claim 1.

8. Claim 9 was rejected as indefinite for failure to identify the structure of formula I. Claim 9 has been amended to depend from claim 1, which identifies the structure of formula I.

9. In claim 10, the purpose for "inhibiting hepatic lipase and or endothelial lipase activity" has not been stated in the claim (e.g., to treat what?). The applicants respectfully traverse this rejection. The claim currently recites a method of inhibiting hepatic lipase. Inhibiting hepatic lipase can have beneficial results such as hypercholesterolemia, hyperlipidemia, or atherosclerosis inter alia. The effect of the method do not need be recited in the claim. Withdrawal of this rejection is requested.

10. Claim 10 lacks antecedent basis from claim 1 because of the term "prodrug". The term "prodrug" has been deleted from claim 10.

11. In claim 12, one cannot treat and or ameliorate at the same time. Only one or the other is possible. The applicants respectfully disagree that one cannot treat and or ameliorate at the same time. Cannot one treat a person with a cold to ameliorate the symptoms of a runny nose, watery eyes and congestion? However, in order to advance the prosecution of this case, claim 12 has been amended to by deleting the term “and/or amelioration”.

In light of the above, withdrawal of the rejections of the claims under 35 USC §112, second paragraph is requested.

III. Rejections under 35 USC §103

Claims 1, 3-9 and 12 were rejected under 35 U.S.C. 103(a) alleged as being unpatentable over Miller et al. (U.S. Pat. 3, 517, 022) and Takahashi et al. (JP 48-029134), each taken alone or in combination with each other. The applicants respectfully traverse this rejection. First, reliance on In re Lemin is misplaced. Lemin is a selection invention where the prior art reference(s) generically disclosed the claimed compounds. In the present application, the prior art references do not encompass the claimed compounds. Furthermore, structural similarity between the prior art compounds and the claimed compounds by itself is not suffice to support a prima facie rejection. Miller described compounds useful to control bacteria, fungi, and algae. Takahasi was cited to teach fungicidal compounds. No other motivation was cited in the Office Action. These references would not motivate one skilled in the art to prepare the presently claimed compounds for use as hepatic lipase inhibitors.

It is a fundamental principle applicable in assessing the obviousness of chemical compounds is that a compound and its properties are, in patent law, inseparable. The Federal Circuit in Lalu noted that: “In determining whether a case of prima facie obviousness exists, it is necessary to ascertain whether the prior art teachings would appear to be sufficient to one of ordinary skill in the art to suggest making the claimed substitution or other modification. In re Taborsky, 502 F.2d 775, 780, 183 USPQ 50, 55 (CCPA 1974). The prior art must provide one of ordinary skill in the art the motivation to make the proposed molecular modifications needed to arrive at the claimed compound. In re Stemmiski, 444 F.2d 581, 586, 170 USPQ 343, 347 (CCPA 1971), Taborsky, 502 F.2d at 781, 183 USPQ at 55, In re Murch, 464 F.2d 1051, 175 USPQ 89 (CCPA 1972), In re Fay, 347 F.2d 597, 146 USPQ 47 (CCPA 1965).” In re Lалу, 223 USPQ 1257, 1258 (Fed. Cir. 1984).

In the present case, Miller et al. describes compounds useful as to control bacteria, fungi, and algae and Takahashi teaches fungicidal compounds. These references would not motivate one skilled in the art to modify the “Miller compounds” or the “Takahashi compounds” and prepare the presently claimed compounds for use as hepatic lipase inhibitors. Because arguably structurally similar compounds control bacteria, fungi and algae does not motivate one skilled in the art to modify these compounds to arrive at the presently claimed compounds, which have use as hepatic lipase inhibitors. In light of the above comments, withdrawal of the rejection is requested.

IV. Claim Amendments

Claim 1 has also been amended by inserting -CF₃, and -O-(C₁-C₃ alkyl), to the list for R₁ groups. Support for this amendment can be found in original claim 3, lines 2 and 3.

Claims 7 and 8 have been amended by canceling compounds not encompassed within the scope of claim 1.

V. New Claims

Claim 18 has been added. Support for this claim can be found in the present application at ¶0076. It is believed that this claim does not add new matter. Further, it is believed that claim is fully enabled by the present application.

VI. Conclusion

In light of the above comments and claim amendments, withdrawal of all outstanding rejections is requested. Applicants respectfully request timely examination of this application leading to allowance of all elected claims. The Examiner is invited to contact the undersigned attorney by telephone if there are any questions about this Response or other issues that may be

resolved in that fashion.

Respectfully submitted,

/James B. Myers/
James B. Myers
Attorney for Applicants
Registration No. 42,021
Phone: 317-276-0755

Eli Lilly and Company
Patent Division
P.O. Box 6288
Indianapolis, Indiana 46206-6288
3 August 2007